

JAN-22-2009 15:29

SAFEWORKS ILLINOIS

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ILLINOIS
Occupational Health Services

RETURN TO WORK CENTER

Recover,
Rehabilitate,
Return to Work,
RESULTSPhysician Owned & Operated -
David J. Fletcher, MD, MPH, FACOE

decatur

1750 E Lake Shore Drive, LL
Decatur, IL 62521
p 217.425.2732
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champaign

1806 N. Market Street
Champaign, IL 61822
p 217.356.6150
f 217.356.7167

January 16, 2009

David Fletcher, MD
Safeworks Illinois Occupational Health
1806 N. Market St.
Champaign, IL 61822**RE: DAVID HOFFMAN - FUNCTIONAL CAPACITY EVALUATION**

Dear Dr. Fletcher,

At your request, a functional capacity evaluation was performed on the above named client. The results of this evaluation are contained in the attached report.

Thank you for your referral of David Hoffman to the *SafeWorks Illinois Return to Work Center*. Please do not hesitate to contact me if you have any questions.

Sincerely,

Karen Caraway MS, CSCS
Exercise Physiologist
SafeWorks Illinois Return to Work Center

EXHIBIT

C

FCE CONCLUSIONS

Client: David Hoffman	Date: January 16, 2009
Diagnosis: 1. Distal femur fracture (distal shaft & lateral condyle) 2. s/p Open reduction & internal fixation of right femur (4/29/03) 3. s/p Bone graft & revision surgery (5/5/03)	DOI: 4/29/2003 Current work status: Off work Soc. Sec. - 0880 DOB: 9/13/68
Employer: McLane Midwest	Occupation: Truck driver
Referral Source: David Fletcher, MD	BMI: 48

Client Effort	CONSISTENT
Pain Questionnaires for Symptom Magnification	POSITIVE
Abnormal Pain Behaviors and Test Response	MINIMAL
Physical Demand Level of Clients Job	MEDIUM
Physical Demand Level Demonstrated by Client	LIGHT-MEDIUM
Primary Recommendations	RETURN TO LIGHT PHYSICAL DEMAND LEVEL

David Hoffman was referred to the SAFEWORKS ILLINOIS Return to Work Center for a functional capacity evaluation (FCE), which was conducted on January 16, 2009. The purpose of this evaluation was to determine the client's functional abilities and to make appropriate recommendations. Mr. Hoffman participated in approximately 2.5 hours of activities which included a structured medical intake interview, standard NIOSH isometric strength testing, JAMAR hand / pinch grip strength testing, real-time isometric strength testing, a dynamic lifting assessment, positional tolerance tasks and an assessment of symptom magnification on written instruments. The following is a summary of the results obtained during this assessment. Please refer to the appropriate sections for more detailed finding. In the report that follows, the term "physiologic" refers to valid, reliable, consistent test results that are representative of a maximal effort and have a physical origin, basis or explanation.

The results of this evaluation reflect a consistent, maximal voluntary effort on the part of the client. Abnormal test behaviors and indicators of symptom magnification were

minimal (positive pain questionnaires). These test results are a valid representation of the client's abilities. Based on these test results, further treatment is difficult to justify. The client has likely reached MMI status. The client's primary physical or functional deficits include: increased antalgia with prolonged walking / standing, decreased squatting abilities, unilateral balance, climbing (stairs / ramp), and working outside of the light-medium physical demand level.

The client is a 40 year old male (297 lbs. / 66 inches / BMI 48), who is employed as a truck driver for McLane Midwest. Mr. Hoffman reports a semi crash to have occurred when another driver fell asleep, crossed the interstate and hit his truck. He was taken to the hospital with a "crushed right femur and lower leg fracture. Surgery was performed that same day. Mr. Hoffman reports the presence of hardware in his right knee and lateral thigh. He has had 3 injections to his knee for pain control, aqua therapy, and physical therapy with improvement. However, the client believes that he has hit a functional plateau. Mr. Hoffman has been unable to return to work. A functional capacity evaluation was performed to assess the client's current physical abilities and consistency of effort.

Mr. Hoffman rates his present amount of pain as being a "5-6," on a scale of 1-10, with his most severe pain as "10," and least amount as a "4." His current subjective complaints include: right knee crepitus, low back pain, leg length difference, right knee weakness, decreased knee ROM, throbbing pain just above right patella, and left knee pain, secondary to compensatory habits.

Mr. Hoffman is working within the light-medium physical demand level. However, he has difficulty with muscular endurance and positional tolerance affecting everyday movements, for example, walking, climbing, squatting, and balance. It is recommended that the client return to work within a light physical demand level with limited stair climbing, squatting, standing or walking. Vocational rehabilitation may be beneficial for this client. The client reports having an eighth grade education. It may be difficult to place Mr. Hoffman in a light physical demand level position without retraining. A home exercise program is strongly recommended. Medical correlation for the above is required.

LEGITIMACY OF EFFORT

The client HAS MET the following validity/reliability criteria listed below:	
1.	Correlation between trials of JAMAR pinch grip testing.
2.	Correlation between test trials of real-time isometric strength testing.
3.	Correlation between test trials during NIOSH isometric strength testing.
4.	Correlation between trials of JAMAR hand grip testing.
5.	Negative rapid exchange hand grip testing.
6.	Correlation between capabilities demonstrated during positional tolerance testing as compared to abilities demonstrated during functional testing.

SUBJECTIVE REPORTS & BEHAVIORAL OBSERVATIONS:

Symptom magnification associated with standard written instruments produced the following findings:	
1.	Anatomic Drawing, (Negative for symptom magnification)
2.	Modified Somatic Perception Scale, (Negative for symptom magnification)
3.	Visual Analog Scale, (Positive for symptom magnification)
4.	0-10+ Pain Scale, (Negative for symptom magnification)
5.	Symptoms Questionnaire, (Positive for symptom magnification)
6.	Waddell Questionnaire, (Positive for symptom magnification)
7.	OswestryLow Back Inventory, (Positive for symptom magnification)

Abnormal test behaviors, such as frequent verbal reports of pain/disability, grimacing, groaning, and rubbing "painful," body parts, were minimally demonstrated by the client during this evaluation. An absence of abnormal test responses allows the results of this test to be classified as "physiologic."

On a scale of 0-100, with "0" representing "no disability at all" and "100" representing "total disability," the client rated his disability at this time as "75-80."

On a scale of 0-100, with "0" representing "no chance at all" that you will have a "good recovery" and "100" representing an "absolute certainty" that you will have a "good recovery," the client did not rate his chances for recovery. His doctor has told him that he is at MMI.

Activities affected by his current condition include:

- Weather changes
- Riding bikes
- Climbing
- Prolonged sitting / Standing
- Riding in a car or driving

The client reports his daily routine to include:

Mr. Hoffman arises between 6:30-7:00am. He will then help his son get off to school. He reports helping his wife whom currently has a medical condition. The client reports competency with self-care "most of the time," but occasionally has help from his son. He specifically reports difficulty with donning socks and shoes. He will perform household duties and sit / stand as needed. The client also reports doing laundry and paying the bills. The client was non-specific regarding other daily tasks. Mr. Hoffman goes to bed between 9:30-11:30 pm and has difficulty sleeping.

BARRIERS TO REHABILITATION

1. Lengthy time in patient role.
2. Overall deconditioned physical status
3. Tendency to somatize pain complaints as seen in client's response on written questionnaires used to identify symptom magnification.

JOB DESCRIPTION

The client reports his job as a truck driver to include: driving a delivery refer unit, unloading groceries, making multiple stops, walking up/down ramp, maneuver a two wheeled cart, palletize product on occasion, 95% of work was convenient stores, maximum lift of 75 lbs., pushing/pulling 300-400 lbs. on cart, and driving to Missouri and Minnesota. A detailed written job description has not been received.

DYNAMIC LIFTING ASSESSMENT

The client's ability to perform dynamic lifting and material handling tasks was assessed. The results appear below.	
Bilateral 20" above floor to waist	-- 65 lbs.
Bilateral 10" above floor to waist	-- 35 lbs.
Bilateral waist to overhead	-- 35 lbs.
Right waist to overhead	-- 25 lbs.
Left waist to overhead	-- 25 lbs.
Bilateral Carry for 60 foot	-- 25 lbs.

The client's strength levels fall within the light-medium physical demand level. He demonstrated physiologic biomechanical breakdown during this portion of testing. His demonstrated lifting techniques are considered good, but decrease as he becomes more fatigued.

NON MATERIAL HANDLING TASKS

The client was assessed for his ability to take part in a variety of non-material handling tasks. The results of these assessments and the observations made during them appear below:

SITTING – The client sat with his feet on the floor and used the back rest of his chair. His right foot was extended out in front of him.

STANDING – When standing, the client demonstrated ear/shoulder/hip alignment and equal weight distribution on both lower extremities. He held a cane in his right hand directly in front of him.

WALKING – The client demonstrated a right antalgic gait and held his cane in his left hand. He was stable during the tandem walking tasks, but moved very quickly off of the

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right lower extremity. The client was unable to walk up and down the ramp. He took two steps, but stated "I can't, that hurts."

SQUATTING -- The client demonstrated his ability to assume a half squat position and maintain it for less than 5 seconds. He used his right arm for assistance on a nearby railing.

UNILATERAL BALANCE - The client demonstrated his ability to unilaterally balance on the right lower extremity for 2 seconds. He reported pain above the right patella following this task. He balanced on his left lower extremity for 15 seconds.

STAIR/VERTICAL LADDER CLIMBING -- The client used a step to step pattern of climbing. He lead with his left leg when ascending and used 2 arm rails. He turned sideways when descending and again lead with the left leg. He held onto one arm rail at this time. The vertical ladder climbing was not attempted at the evaluator's discretion, secondary to the possibility of a safety hazard.

RANGE OF MOTION: The client's left hip and knee range of motion are within normal limits. His right hip ROM is also within normal limits. However, Mr. Hoffman's right knee flexion is decreased at 45 degrees.

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Hoffman, David**Client Information**

Client Name: Mr. David A. Hoffman

Address: 11536 Hawbuck Rd.
Danville, IL
61834

Injury Date: April 29, 2003

Dominant Hand: Right Hand
SSN: 111-11-0880

Date of Birth: September 13, 1968

Gender: Male

Height: 66 inches

Weight: 297 lbs

Marital Status: Married

PREPARED FOR:Attn: Dr. David Fletcher
Safeworks Illinois Occupational Health Services
1806 N. Market St.
Champaign, IL
61820

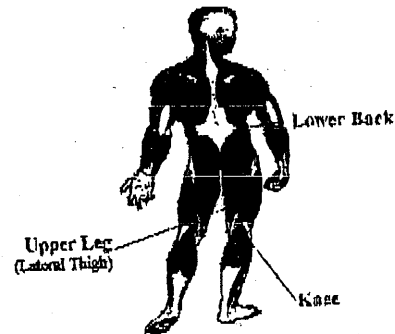
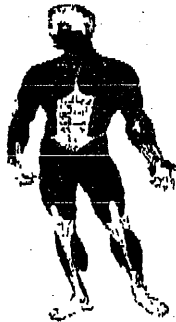
Tel: (217) 356-6150 Fax: (217) 356-7167

Employment InformationOccupation: Truck driver
Employer: McLane Midwest
Address: 1800 E. Main
Danville, IL
61832

Start & Finish Date: Jan 16, 2009

Evaluator: Karen Caraway, MS, CSCS

Work Status: Not currently working

Areas of Complaint

General Location	Specific Location	Plane	Side	Pain Type	Pain Scale
			Right	Dull Ache	7 - Low Intense
Knee			Right	Dull Ache, Burning, Numbness	7 - Low Intense
Lower Back (Lumbosacral)			Right	Dull Ache, Numbness	6 - High Moderate
Upper Leg	Lateral Thigh				

Karen Caraway, MS, CSCS
Exercise Physiologist**Hand Grip Strength**

The JAMAR hand dynamometer was used in order to quantify grip strength and determine whether Mr. David A. Hoffman exerted consistent effort during grip strength testing. Mr. David A. Hoffman was tested using the maximum voluntary effort and rapid exchange hand grip protocols. Mr. David A. Hoffman is right hand

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All testing was completed using the FOCUS System, Data Management was compiled through ODES products of BTE Technologies



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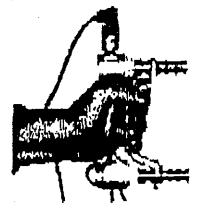
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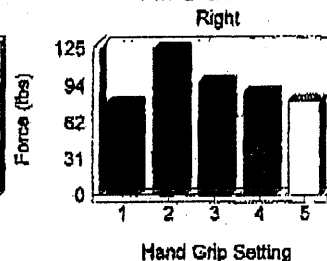
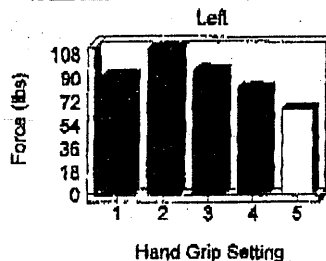
dominant. Normative is based on the assumption that right and left hand dominant subjects, analyzed separately show little functional difference between their mean scores.^{1, 2.}

Maximum Voluntary Effort (MVE)

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The hand dynamometer is set to each of the five available positions which vary the client's grip size. The results for each of the average maximum forces during each position are displayed by the corresponding bar graphs.

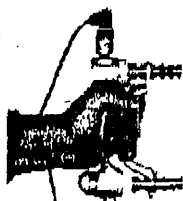


	Left	COV	Right	COV
Pos #1	92.2 lbs.	9.1%	79.7 lbs.	7.5%
Pos #2	113.0 lbs.	4.1%	124.7 lbs.	0.1%
Pos #3	96.5 lbs.	6.1%	96.9 lbs.	9.8%
Pos #4	83.0 lbs.	4.5%	88.3 lbs.	6.4%
Pos #5	67.7 lbs.	7.0%	81.4 lbs.	4.6%

St. Dev. 15.0 Lbs. 16.4 Lbs.

Using the Maximum Voluntary Effort (MVE) protocol over a range of five positions on the hand dynamometer, it is expected that the strength graphs obtained results in a bell-shaped curve^{3,11,12,13.} even in a disabled population or if the client's hand is injured^{12.} with at least 6 of the 10 coefficients of variation within the acceptable 15% or less limit.²²

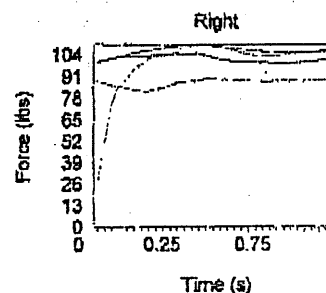
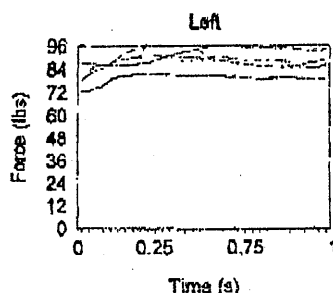
The graph obtained for Mr. David A. Hoffman did not demonstrate a bell shaped curve which may be an indicator of submaximal effort and the coefficients of variation of the underlying data may be an indicator of consistent effort with all 10 coefficients of variation within the 15% acceptable limit.



The hand dynamometer is set to position 2. The client applies a maximum force for a one second trial duration quickly alternating between hands. The average maximum force for all six trials is compared to the maximum voluntary effort value in the same position for reliability purposes.¹²

Rapid Exchange Grip (REG)

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	Left	Right
Trial #1	96.0 lbs.	109.2 lbs.
Trial #2	95.8 lbs.	108.9 lbs.
Trial #3	81.7 lbs.	104.3 lbs.
Trial #4	91.1 lbs.	89.1 lbs.
Trial #5	88.5 lbs.	93.5 lbs.
Trial #6	84.0 lbs.	105.0 lbs.
Average	89.5 lbs.	101.7 lbs.
Maximum	96.0 lbs.	109.2 lbs.
Diff L Vs. R	12.0%	

The peak average force value recorded during the maximum voluntary effort protocol was 124.7 lbs performed at position 2. The Rapid Exchange Grip (REG) protocol was therefore administered at this position. A negative rapid exchange grip (REG) occurs when the average of the values recorded during the rapid exchange grip protocol are less than the average of the values recorded during the maximum voluntary effort protocol in the same position and for the same hand. Conversely, a positive REG occurs when the average of the values recorded during the rapid exchange grip protocol exceed the average of the values recorded during the maximum voluntary effort protocol in the same position and for the same hand. A negative REG allows the evaluator to have more confidence that the evaluatee is performing maximally. A positive REG may be an indicator of submaximal effort.¹² Mr. David A. Hoffman produced an average value of 89.5 lbs for the left hand and 101.7 lbs for the right hand during the rapid exchange protocol. He produced an average value of 113.0 lbs for the left hand and 124.7 lbs for the right hand during the maximum voluntary effort protocol. Mr. David A. Hoffman therefore demonstrated a negative REG which may be an indicator of maximal effort.

³ Stokes H. 1983. The seriously uninjured hand - weakness of grip. J Occup Med 25(9):683-684.

¹¹ Niebuhr B, Marion R. 1990. Voluntary control of submaximal grip strength. Am J Phys Med Rehabil 69(2): 96-101.

¹² Matheson L, Carlton R, Niemeyer L. 1988. Grip strength in a disabled sample: reliability and normative standards. Ind Rehabil Q 1(3):9,17-23.

¹³ Hildreth D, Breidenbach W, Lisner G, Hodges A. 1989. Detection of submaximal effort by use of the rapid exchange grip. J Hand Surgery 14A(4): 742-745.

²² Klimek E, Strait J. 1997. Volition in impairment rating: the validity of effort assessment. J Occup Med 6(2) 9-18.

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Mr. David A. Hoffman



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Pinch Strength

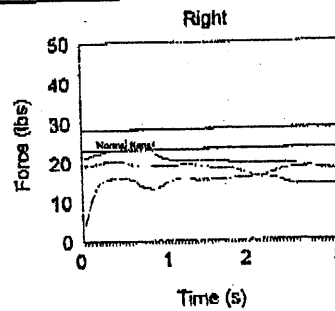
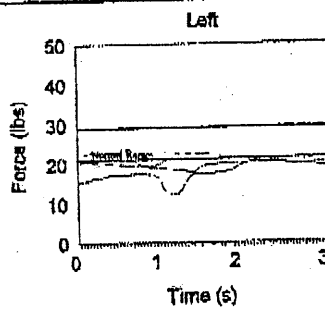
The FOCUS pinch strength test is performed to quantify pinch strength as compared to population norms.[†] Mr. David A. Hoffman was asked to perform three forms of pinch strength tests including the tip, key and palmar pinch. The data demonstrated that Mr. David A. Hoffman's tip pinch strength was normal for both the left and right hand. His left hand was 7.9% weaker than the right hand. Key pinch strength was normal for the left hand and significantly low for the right hand. His left hand was 8.6% stronger than the right hand. Palmar pinch strength was normal for both the left and right hand. His left hand was 10.9% weaker than the right hand which is consistent with published population norms.

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Key Pinch Strength



The client squeezes the pinch gauge using a key pinch for a three second trial duration. A rest period of 5 seconds is given before testing the other hand. This process is repeated three times. The average of the three trials is compared to published population normal values.[†]

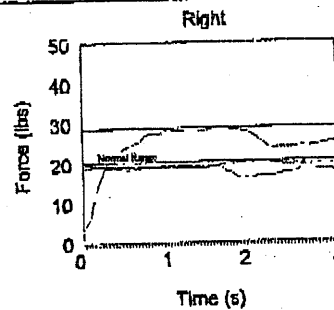
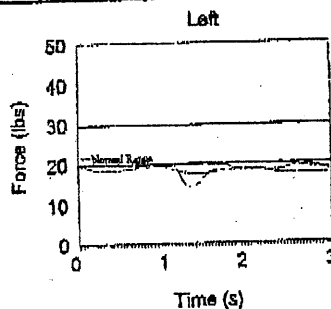


	Left	Right
Trial #1	20.0 lbs.	15.7 lbs.
Trial #2	20.9 lbs.	23.5 lbs.
Trial #3	23.2 lbs.	19.9 lbs.
Average	21.4 lbs.	19.7 lbs.
Maximum	23.2 lbs.	23.5 lbs.
COV	6.3%	16.2%
Diff L Vs. R	8.6%	

Palmar Pinch Strength



The client squeezes the pinch gauge using a palmar pinch for a three second trial duration. A rest period of 5 seconds is given before testing the other hand. This process is repeated three times. The average of the three trials is compared to published population normal values.[†]

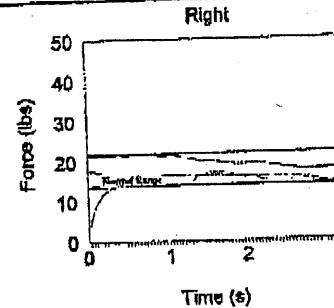
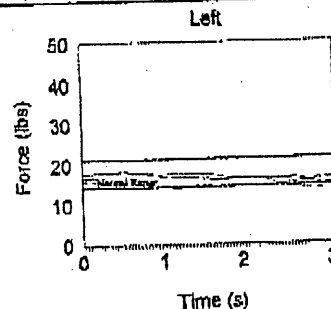


	Left	Right
Trial #1	20.0 lbs.	28.9 lbs.
Trial #2	21.5 lbs.	19.9 lbs.
Trial #3	19.8 lbs.	19.9 lbs.
Average	20.4 lbs.	22.9 lbs.
Maximum	21.5 lbs.	28.9 lbs.
COV	3.7%	18.5%
Diff L Vs. R	10.9%	

Tip Strength

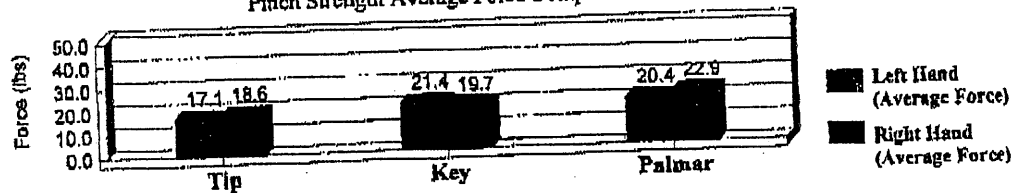


The client squeezes the pinch gauge using a tip pinch for a three second trial duration. A rest period of 5 seconds is given before testing the other hand. This process is repeated three times. The average of the three trials is compared to published population normal values.[†]



	Left	Right
Trial #1	17.2 lbs.	16.4 lbs.
Trial #2	18.1 lbs.	21.6 lbs.
Trial #3	15.9 lbs.	17.7 lbs.
Average	17.1 lbs.	18.6 lbs.
Maximum	18.1 lbs.	21.6 lbs.
COV	5.3%	11.9%
Diff L Vs. R	7.9%	

Pinch Strength Average Force Comparison



[†] Mathiowetz V, Kashman N, Volland G, Weber K, Dowe M, Rogers S. 1985. Grip and pinch strength: normative data for adults. Arch Phys Med

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Mr. David A. Hoffman

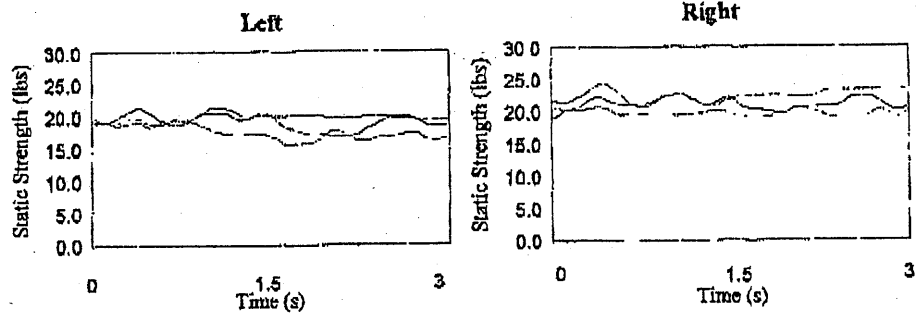
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UTM Standard Cart Height Pull Test

Test Date: Jan. 16, 2009 2:31:27 PM

Combined Peak Force: 43.3 lbs.

Forward Foot:



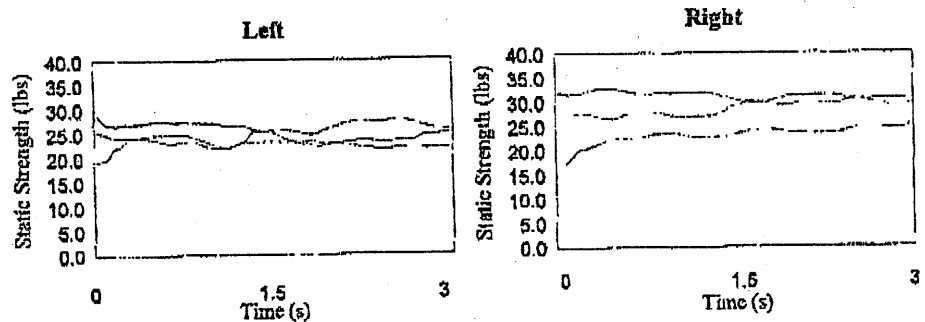
Trial 1: 21.3 lbs	Average: 20.8 lbs	L R % Diff: 8.8%	Trial 1: 23.3 lbs	Average: 22.8 lbs
Trial 2: 21.3 lbs	COV: 3.4%		Trial 2: 24.3 lbs	COV: 6.7%
Trial 3: 19.8 lbs			Trial 3: 20.7 lbs	

Mr. David A. Hoffman reached a combined peak force of 43.3 lbs. during the UTM Standard Cart Height Pull Test test. The combined peak force is calculated by storing the combined maximum of the left and right force at any instant in time during each trial then averaging over all the trials. The average of the peak forces for the individual sides are 20.8 lbs. for the left side and 22.8 lbs. for the right side. This yields 8.8% difference between the sides. The coefficient of variation was 3.4% for the left side and 6.7% for the right side. Values greater than 15% may be an indicator of submaximal effort.

UTM Standard Cart Height Push Test

Test Date: Jan. 16, 2009 2:30:41 PM

Combined Peak Force: 55.6 lbs.



Trial 1: 24.7 lbs	Average: 27.2 lbs	L R % Diff: 7.5%	Trial 1: 25.2 lbs	Average: 29.4 lbs
Trial 2: 28.9 lbs	COV: 6.6%		Trial 2: 32.8 lbs	COV: 10.7%
Trial 3: 27.9 lbs			Trial 3: 30.2 lbs	

Mr. David A. Hoffman reached a combined peak force of 55.6 lbs. during the UTM Standard Cart Height Push Test test. The combined peak force is calculated by storing the combined maximum of the left and right force at any instant in time during each trial then averaging over all the trials. The average of the peak forces for the individual sides are 27.2 lbs. for the left side and 29.4 lbs. for the right side. This yields 7.5% difference between the sides. The coefficient of variation was 6.6% for the left side and 10.7% for the right side. Values greater than 15% may be an indicator of submaximal effort.

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Mr. David A. Hoffman

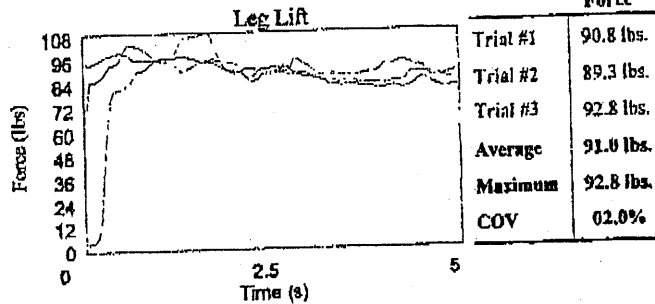
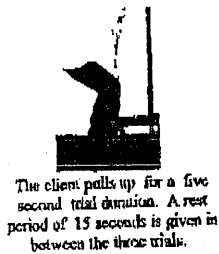


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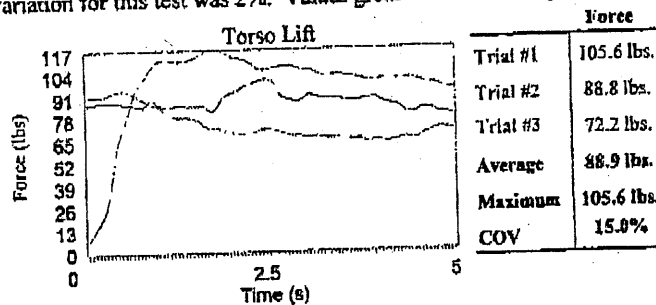
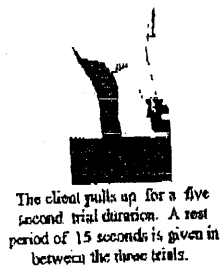
**Standard
NIOSH**

Mr. David A. Hoffman's ability to lift, push or pull was assessed using the FOCUS Standard NIOSH strength test. It is predictable that leg strength will be greater than either torso or arm strength.† Mr. David A. Hoffman demonstrated this predictable decrease in isometric strength.

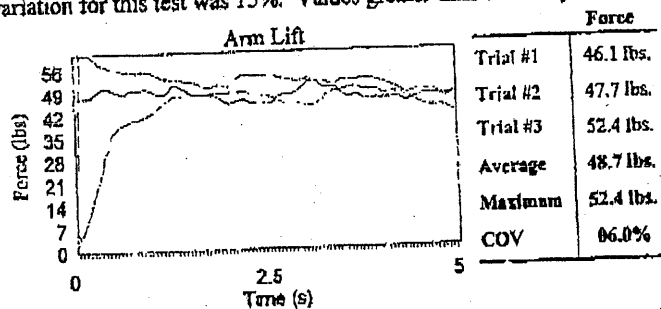
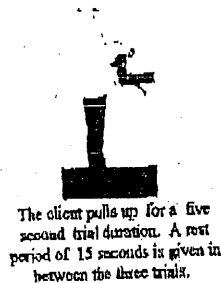
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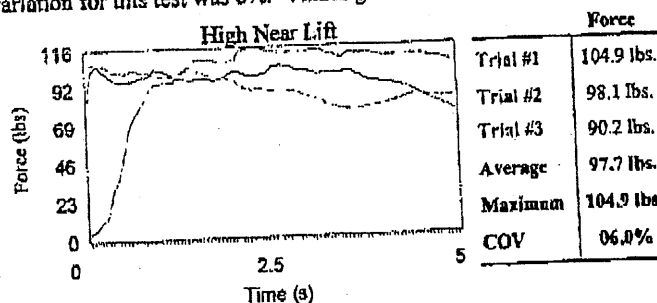
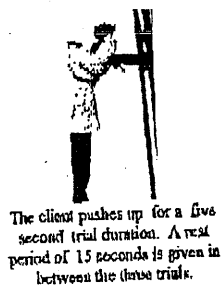
An average force of 91 lbs. was exerted by Mr. David A. Hoffman during the leg lift. The coefficient of variation for this test was 2%. Values greater than 15% may be an indicator of inconsistent effort.



An average force of 88.9 lbs. was exerted by Mr. David A. Hoffman during the torso lift. The coefficient of variation for this test was 15%. Values greater than 15% may be an indicator of inconsistent effort.



An average force of 48.7 lbs. was exerted by Mr. David A. Hoffman during the arm lift. The coefficient of variation for this test was 6%. Values greater than 15% may be an indicator of inconsistent effort.



An average force of 97.7 lbs. was exerted by Mr. David A. Hoffman during the high near lift. The coefficient of variation for this test was 6%. Values greater than 15% may be an indicator of inconsistent effort.

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Mr. David A. Hoffman



CAR 0011

JAN-22-2009 15:33

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† Atuahene, F and A. Freiv. (1987) Comparison of Dynamic Static and Psychophysical evaluations of Human Strength Capabilities. Journal of Human Ergology, Vol. 16, No. 2: 17-191

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